

MAGNETIC FIELD EFFECT ON SOUND PROPAGATION IN ANTIFERROMAGNETS

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On the basis of the theory of phase transitions a model describing anomalies of sound attenuation coefficient close to the antiferromagnet-paramagnet phase transition in magnetic field has been developed. The scaling behaviour of sound velocity and attenuation coefficient was obtained. The physical origin of the two-peak structure in the field dependent ultrasound attenuation observed in a number of antiferromagnets was identified. The theoretical results have been compared with experimental measurements in terbium.

9.7 cm

13.4 cm

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